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Experienced young PDA users set their own standards for m-learning

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Abstract

“Mr Flynn, I am getting better and better at using this PDA. Am I as good as you now?”

The Learning2go mobile learning project in Wolverhampton has involved over 1000 learners in 18 learning establishments across both primary and secondary phases. Since October 2005, learners have had their own PDA (personal digital assistant) to use both in school and beyond. They have used the device in a variety of exciting ways, including:

- receiving and learning from multi-media content
- browsing and researching from the Internet
- communicating their ideas
- authoring their own work using a variety of applications.

The Learning2go project has as its ethos the belief that learners should have the choice and self-confidence to learn when, how and where they want. The project promotes a personalised learning experience, in which the learner is responsible for managing their own device and helping to shape their own learning.

As the learners have had 100% access to the device during the course of this academic year, their m-learning capability has exceeded initial expectations. This short paper will describe how a group of experienced PDA learners, from several project schools, met to discuss, suggest and re-define how their progress in m-learning could be measured and recognised.

During the discussion session, children and teachers worked in partnership to describe 3 standards to which all learners should aspire. Learners were clear in their own mind what constituted a ‘good’ mobile learner across 5 categories of PDA use.

From these discussions, the ‘Loox Cool’ bronze, silver and gold awards were born. In this paper, the authors will share the process which resulted in the formation of these awards, blending m-learning and pupil voice.

Children’s experiences driving m-learning standards – are they not the best judge?

Experienced young PDA users set their own standards for m-learning

Introduction

Before September 2002, the concept of PDA's was an unknown quantity to much of the education sector in the UK. The overriding view seemed to be that a business person's tool, used predominantly to organise appointments and store contact details, had little role within the classroom. Were they not essentially a scaled-down version of the technology that already existed? Pocket Word, Pocket Excel – well known applications in mobile form. Why replace traditional pencil and paper methods with an electronic form which could be potentially unreliable? The adage "If it ain't broken, don't fix it!" seemed to encapsulate opinion.

Despite this mind-set, individuals within Wolverhampton, who were fast becoming immersed in the LA's progressive vision for ICT, saw the potential for mobile technology and mobile learning. And so with the help of David Whyley (Wolverhampton E-Learning Head teacher Consultant) and BECTA, twelve HP Ipaq devices were introduced into a Year 6 English group at Stow Heath Junior School, Wolverhampton. Wolverhampton is an urban conurbation in the industrial heartland of England, characterized by areas of severe deprivation, an ethnically diverse population and 'digital divide'.

In the first instance, the devices were still used as an authoring tool in the classroom; the children involved soon realised that they had ICT at their fingertips – they didn't have to wait until the whole class once weekly ICT lesson. Even at this early stage, the impact of these rather

'basic' devices was evident – increased motivation, engagement with learning, attendance and attainment. Was it pure co-incidence that all children involved achieved the highest level in their end of Key Stage assessment tests?

Even though the devices had had a fundamental effect on the children's learning, the true potential of the handheld device was unlocked the following year by a 10 year old whilst watching a piece of multimedia courtesy of Espresso education. Her natural curiosity and inquisitive nature prompted her to ask the question – "Can I watch this piece of video on my PDA and take it home?" Her dumbfounded teacher could simply shrug his shoulders! Not content with this response, the child returned home that night and downloaded a free piece of software which enabled her to save and play her favourite video clip from Espresso on her return to school. This was truly the defining moment of the initial BECTA pilot project (BECTA/Perry 2003) – from this the notion of Learning2Go was born.

Development of the Learning2Go project

Over the next few months, lead by the vision of David Whyley, the project began to gather pace. Potential software partners were approached and convinced of the possibilities of multi-media rich handheld learning. In September 2004, Phase 1 of Learning2Go (Microsoft 2005) began in earnest – 120 Toshiba devices were placed in the hands of learners in two primary schools and two secondary schools. These devices differed profoundly from the original Ipaqs, both in design and in content, embodying the ethos that underpins the Learning2Go

project, namely using handheld computers to engage learners by delivering multimedia content, Internet and authoring tools to the palm of a learner's hand. Children had at their disposal multi-media software stored on an SD card, as well as a wireless and infra-red connectivity. True E-Learning began to unfold – children were using ICT as a tool to enhance and enrich their learning across all aspects of the curriculum. From research on the Internet to recording work using the video and stills camera, from downloading E-books to using interactive learning content, E-learning was now becoming a reality; seamless and almost second-nature use of technology, both in school and at home. Positive outcomes of Phase 1 were numerous – ICT skills exceeded expected National Curriculum levels, there was evidence of improved standards in other curriculum areas, children were beginning to become far more independent in their learning, aspirations, motivation and their own expectations were significantly raised and children were far more engaged in the learning process. As one child commented, "Our lessons are really good fun now."

Phase 2 of Learning2Go began with high expectations following the success of the first phase. 120 Toshiba devices in four learning establishments were scaled up to 1000 Fujitsu-Siemens Pocket Loox 720 devices in 18 establishments, including primary schools, secondary schools and a Pupil Referral Unit. Such an increase in number had training implications – one of the project's principal values is that the classroom practitioner is key to its success. Much time and money was invested in training staff in order that confidence levels were high.

Phase 2 saw a significant increase in collaboration with key software partners. The positive effects of a wide range of stimulating learning content and applications, coupled with

inventive cross-curricular teaching and learning opportunities, saw a dramatic increase in previously unseen and un-measured ICT knowledge and skills. Through observation and conversation, it was apparent that children had also formulated their own working definition of effective E-learning.

The "Loox Cool" award – children setting the standard for mobile learning

Assessment of primary school ICT has traditionally tended to focus predominantly on the acquisition and development of taught skills, learned via discreet ICT lessons. Levelled either against National Curriculum expectations or assessed against end of QCA unit criteria, such assessment rarely gives a true indication of the child's E-learning and by definition does not cater for the use of applications and skills developed through the use of handheld devices. In his evaluation of Phase 1 of Learning2Go, David Perry commented:

> *"Talking to these children, it is difficult not to be stunned at the adult way in which they use technical vocabulary, and this must represent a strong contribution to their ICT understanding."*
>
> David Perry – "I was Pants at IT" Sept 2005

The concept of assessing mobile learning was first prompted, quite rightly, by a child who asked, "How good am I at using my PDA?" The hesitation by an experienced member of staff when giving an appropriate response put the wheels in motion – how could we truly measure this new and previously unchartered learning?

Perhaps the most fundamental value of Learning2Go is that the child is central to their own learning. Children are perhaps the most significant partner – as commented earlier, their natural curiosity and appetite for multi-media learning has driven the project forward. In terms of assessing their newly acquired competencies, it was thought inappropriate that adults, who potentially knew far less about the devices, prescribe the criteria by which children would be measured. With this in mind, a select group of experienced handheld users were brought together, from a variety of schools. Their task - to devise a set of criteria, an award scheme, by which other users in the authority could be assessed.

Sponsored by the manufacturers of the current PDA device, the concept behind the "Loox Cool" award scheme were simple; firstly we wished to formulate criteria by which children and teachers could assess mobile learning competencies. Secondly, we wished to publicly reward children for their hard work and perseverance. Thirdly, we wanted the children to feel a real sense of ownership – an award system created by children, for children. And, if we are honest, we felt the children were far more knowledgeable about the functionality of the device than we were! Six experienced users, and two "new" users, were chosen from 4 schools from across Wolverhampton, their ages ranging from 10-16.

The award itself takes the form of gold, silver and bronze levels. For each there is a "Loox Cool" badge, coupled with tee-shirts. Our task as experienced users was to decide on the criteria which had to be fulfilled to achieve each level of competence.

The day itself began with a brief introduction from experienced lead teachers. Although the Learning2Go initiative promotes independence and children taking responsibility, it has become clear that the role of classroom practitioners is key. Deciding on key criteria for the award scheme was no different - our experience as lead teachers guided the children, clarified and channelled their thinking and discussion. The children were keen to firstly discuss and decide upon five key areas of PDA use which could be assessed. After lengthy debate, the following areas were agreed:

- device management
- use of multimedia
- use of the Internet
- use of E-books
- use of applications within the device.

For each area, children then put forward their ideas as to which skills might lend themselves to gold standard, which to silver and which to bronze. This particular discussion was fascinating to observe – experienced users of mixed age and gender, from across the city of Wolverhampton, engaging in articulate, collaborative, technical debate.

After much deliberation, an almost definitive list was drawn up for each award. The silver and bronze awards tend to focus predominantly on skill acquisition – as one child quite rightly commented, “You can’t really E-Learn with the PDAs if you don’t know how to use them.” The

children were keen to point out, for example, that beaming data via infra-red was a bronze standard skill, whereas swapping SD cards in order to exchange data was a skill required in the silver award.

The gold award has as its focus the notion of true E-Learning – combining using the device with cross-curricular learning skills such as decision making, independent thinking, collaboration and investigation. For example, whereas using one of the device's applications on its own might meet one of the criteria for bronze or silver, the children decided that combining applications to produce an end result, for example creating an "HLE project" (an application which allows the children to bring together a number of documents under on program to create their project) about a recent educational visit, was surely gold standard! These higher level skills are very much decision driven, with the child having to choose effective ways of using the device rather than being told what to do. The culmination of this day, followed by two day's follow up, was the creation of a list of criteria for each award – Gold, Silver and Bronze.

[INSERT FIGURE 1 ABOUT HERE]

Impact

Unbeknown to the children, much of what they described in terms of M and E-Learning ties in well with National Curriculum, and Wolverhampton's recently published "E-Strategy" (Wolverhampton 2006). Children involved in Learning2Go already see themselves as either being or having the potential to be true M and E- Learners. This is what National Curriculum ICT advocates – the use and application of taught skills in order that children become E-Learners. Through the "Loox Cool" award scheme, our PDA users can demonstrate their E-

Learning journey, culminating in them becoming true mobile E-Learners. And what has made the “Loox Cool” award scheme so refreshingly different is that it is the learners themselves who are leading the way forward.

[INSERT FIGURE 2 and 3 ABOUT HERE]

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Table 1

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Figure Captions

Figure 1. An example of Bronze award criteria

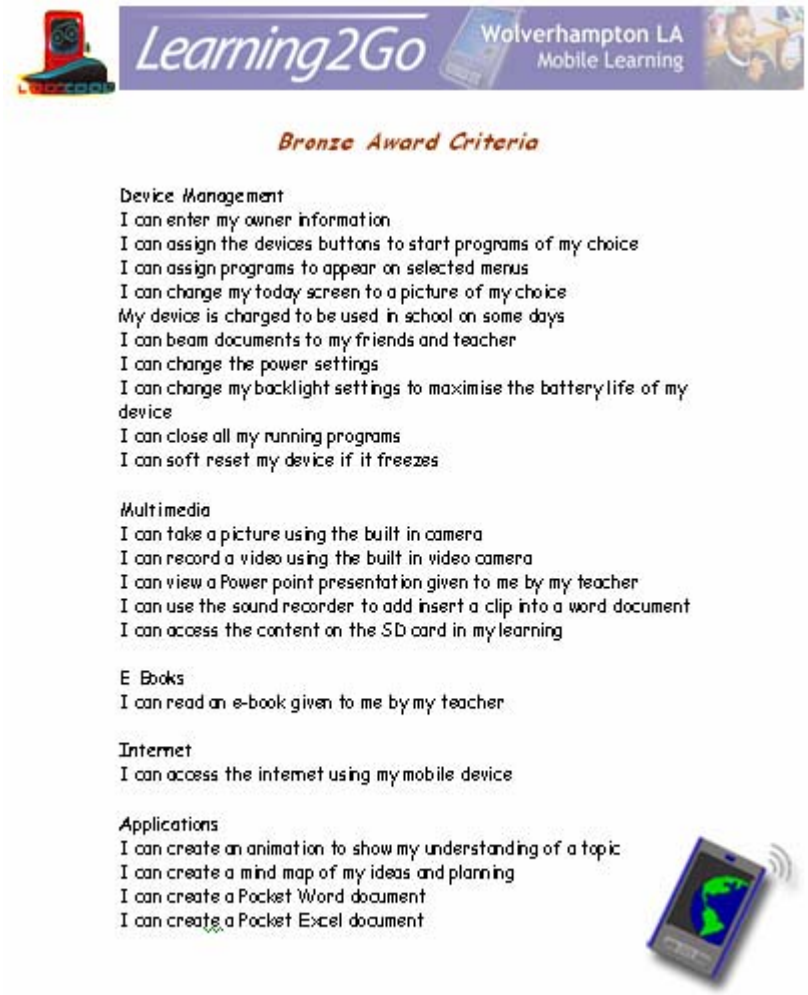

Figure 2 Loox Cool award badges and PDA

Figure 3 Loox Cool award winners presented with their awards, badges and t-shirts.